

CLAIMS:

1. A method of producing a tube which has a tube body portion constituting an outer hull of flow passages, and flow passage dividers for dividing the flow passages,
5 comprising:

a roll forming process to form the tube, a cutting process to cut the tube to a predetermined length after the roll forming process, and a brazing process to braze the tube contact portions of the flow passage dividers
10 to the inner surface of the tube body portion after the cutting process, wherein:

the cutting process forms a slit in the tube so as to concentrate a stress on the slit, thereby the tube cutting starts from the slit as a starting point; and

15 the slit is formed in only the tube body portion between the tube body portion and the flow passage dividers.

2. A method of producing a tube which has a tube body portion constituting an outer hull of flow passages and flow passage dividers for dividing the flow passages,
20 comprising:

a roll forming process to form the tube, a cutting process to cut the tube to a predetermined length after
25 the roll forming process, and a brazing process to braze the tube contact portions of the flow passage dividers to the inner surface of the tube body portion after the cutting process, wherein:

the cutting process forms a slit in the tube so as to concentrate a stress on the slit, thereby cut the tube cutting starts from the slit as a starting point; and

the slit is formed ranging from the tube body portion
5 to the tube contact portions of the flow passage dividers.

3. The method of producing a tube according to claim 1 or 2, wherein the slit is formed by moving a cutter blade in parallel to the surface of the tube.

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4. The method of producing a tube according to claim 1 or 2, wherein the slit is formed by moving a disk cutter in parallel to the surface of the tube.

15 5. The method of producing a tube according to any of claims 1 through 4, wherein the tube is pulled in the longitudinal direction to concentrate a stress on the slit.

20 6. The method of producing a tube according to claim 5, wherein:

the roll forming process and the cutting process are performed while conveying a workpiece continuously, and

the tube is pulled in a longitudinal direction with
25 feed rollers disposed on the downstream side of a position, where the slit formation is performed, in a conveying direction and a conveying velocity provided by the feed rollers set to be faster than a conveying velocity in

the roll forming process.

7. The method of producing a tube according to claim 5, wherein:

5 the roll forming process and the cutting process are performed while conveying a workpiece continuously, and
the tube is pulled in a longitudinal direction by holding the upstream and downstream sides of a portion, where the slit is formed, in a conveying direction by
10 means of a pair of clamps and expanding a space between the pair of clamps relatively.

8. The method of producing a tube according to any of claims 1 through 4, wherein a stress is concentrated on
15 the slit by applying a load to the tube in a direction different from its longitudinal direction.

9. The method of producing a tube according to claim 8, wherein:

20 feed rollers are disposed offset with respect to the longitudinal direction of the tube; and

the tube is passes through the feed rollers after the slit is formed, thereby a load is applied in a direction different from the longitudinal direction of the tube.

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10. The method of producing a tube according to claim 8, wherein the tube is oscillated, thereby a load is applied in a direction different from the longitudinal

direction of the tube.

11. The method of producing a tube according to any of
claims 1 through 10, wherein the tube is a flat type and
5 has a thickness of 0.8 to 1.7 mm.

12. The method of producing a tube according any of
claims 1 through 11, wherein a material of the tube body
portion has a thickness of 0.15 to 0.25 mm.

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13. The method of producing a tube according to any of
claims 1 through 12, wherein:

the flow passage dividers are beads formed by forming
a material of the tube body portion, and

15 the tops of the beads are brazed to the inner surface
of the tube body portion.

14. The method of producing a tube according to any of
claims 1 through 12, wherein the flow passage dividers
20 are provided by inner fins which are formed of a member
different from that of the tube body portion.

15. The method of producing a tube according to claim
14, wherein:

25 the inner fins are a corrugate type, and

the tops of the inner fins are brazed to the inner
surface of the tube body portion.

16. The method of producing a tube according to claim 15, wherein the inner fin has a width of 0.3 to 1.4 mm in an amplitude direction.

5 17. The method of producing a tube according to claim 15 or 16, wherein a material of the inner fins has a thickness of 0.05 to 0.10 mm.

10 18. The method of producing a tube according to any of claims 15 through 17, wherein the tops of the inner fin have a pitch of 0.6 to 2.0 mm.

15 19. A heat-exchange tube, which is produced by the production method according to any of claims 1 through 18.

20. A heat exchanger comprising the heat-exchange tubes as recited in claim 19.